AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the

application:

1.   (currently amended) A sparse array antenna comprising series-fed antenna array

columns comprising transmitting array columns and receiving array columns tuned to a

respective transmit and receive frequency, each transmitting array column having multiple ~~active~~

transmitting radiator elements and each receiving array column having multiple ~~active~~ receiving

antenna elements, wherein:

said transmitting ~~and receiving~~ array columns are formed with a given distance between

each one of the ~~active~~ transmitting radiator elements ~~and each one of the active receiving radiator~~

~~elements~~, and a distance between each transmitting array column in the array antenna is one

wavelength of the transmitting frequency, and

said receiving array columns are formed with a given distance between each one of the

receiving radiator elements, and a distance between each receiving array column in the array

antenna is one wavelength of the receiving frequency, and

the series-fed antenna columns being arranged in parallel to each other, thereby forming a

symmetric interleaved transmit/receive array; ~~and~~

~~active~~ receiving radiator elements in the receiving array columns operate as parasitic

elements in a transmit mode and ~~active~~ transmitting radiator elements in the transmitting array

columns operate as parasitic elements in a receive mode, ~~thereby reducing~~ to reduce creation of

grating lobes.

wherein the sparse array antenna includes a main radiation lobe and is arranged to be scannable to reduce sidelobes entering visual space when scanning the main radiation lobe from an off boresight direction.

2.   Canceled

3.   (currently amended) The antenna according to claim 1~~2~~, wherein the series-fed array columns are formed as extended ridged slotted wave-guides, comprising slotted transmitting wave-guides and slotted receiving wave-guides, tuned to said respective transmitting and receiving frequency.

4.   (original) The antenna according to claim 3, wherein when having number n of slots in each slotted transmitting wave-guide the number of slots in each slotted receiving wave-guide being generally $n \pm x$, where x represents an integer digit (x =0, 1, 2, 3 ...).

5.   (currently amended) The antenna according to claim 1~~2~~, wherein the series-fed array columns are formed as extended transmission lines containing radiation elements, the array columns being tuned to said respective transmitting and receiving frequency.

6.   Canceled.

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7.   (previously presented) The antenna according to claim 1, wherein each one of the

series-fed antenna columns is narrowly tuned within a respective frequency band to thereby

reduce coupling between the transmitting and receiving bands used.

8.   (previously presented) The antenna according to claim 1, wherein the series-fed

antenna array columns are connectable to and feedable from an active receive/transmit (T/R)

module.

9.   (currently amended) The antenna according to claim 1~~2~~, wherein only one set of

series-fed columns being actively used and another interleaved set of series-fed columns may be

terminated by a load forming parasitic columns of the sparse array antenna.

10.   (New) The antenna according to claim 1, wherein said wave-guides are arranged

symmetrically about a line that extends through a center of each wave-guide.